REMARKS

[0002]   Applicant respectfully requests reconsideration and allowance of all of the claims of the application. The status of the claims is as follows:

- Claims 1-3, 5, 7-9, 11-22, 24-27, 29-31, 35, 36 and 39-45 are currently pending

- Claims 1-3, 5, 8, 27 and 27 are amended herein

[0003]   Claim 1 has been amended to clarify that the loose temporal constraints specify relative timing information, but not exact literal times at which an event will be executed.   This is supported throughout the Applicant's specification, such as the Abstract, and paragraphs [0010], [0012], [0042], [0048] and [0051] and others. Additionally, claim 1 has been amended to clarify that each of a plurality of execution orders specifies exact times at which an event is executed. The generation of such exact times is seen in numerous locations, such as Fig. 15, which describes one method by which this can be done.   Claim 1 has been amended to clarify the relationship between the loose temporal constrains, given by the user, and the plurality of execution orders, containing specific event execution times, determined by the system, typically based on the execution system information (e.g. the capacities of the system that will ultimately be executing the events). This is discussed throughout the application (e.g. [0042]), be is addressed in compact form in the Summary.

[0004]   Claims 8, 27 and 29 have been similarly amended, and support is similarly located in the Applicant's specification and drawings.

Cited Documents

[0005]   The following documents have been applied to reject one or more claims of the Application:

- Connelly: Connelly et al., U.S. Patent No. 7,376,733

- Eatough: Eatough, U.S. Patent Application Publication No. 2002/0087623

- Colle: Colle et al., U.S. Patent Application Publication No. 2004/0133889

- Green: Green et al., U.S. Patent No. 4,646,231

- Zeidman: Zeidman, U.S. Patent No. 6,934,947

- Zweben: Zweben et al., U.S. Patent No. 5,768,586

Claims 1 and 27 Are Non-Obvious Over Connelly in view of Eatough

[0006]   Claims 1-3, 5, 7, 27 and 43 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Connelly in view of Eatough.   Applicant respectfully traverses the rejection.

Independent Claims 1 and 27

[0007]   In light of the amendments presented herein, Applicant submits that the rejections of independent claims 1 and 27 are moot. Specifically, these claims have been amended as seen below to overcome the rejections.

 1.   **(Currently Amended)** An interactive computer-implemented system for specifying and executing temporal order events, comprising a processor executing:

 a constraint component that receives, from a user, loose temporal constraints associated with a plurality of events, wherein the loose temporal constraints specify information about execution of the plurality of events, and **wherein the loose temporal constraints specify relative timing information but not exact literal times that that each of the plurality of events is to be executed;**

a system information component that receives execution system information comprising one or more of available memory, cache coherency, data throughput or number of processors; and

an order component that determines a plurality of event execution orders in accordance with the loose temporal constraints and via utility-based analysis of the execution system information, and selects an optimal event execution order from the plurality of event execution orders; based on the execution system information; wherein:

each of the plurality of execution orders specifies exact literal times each of the plurality of events is executed;

the exact literal times are consistent with the loose temporal constraints; and

all of the plurality of execution orders do not provide the same specific temporal constraints on the plurality of events, but all of the plurality of execution orders are based on the loose temporal constraints.

[0008]   Claim 1 recites in part, "wherein the loose temporal constraints specify relative timing information but not exact literal times that that each of the plurality of events is to be executed." The Office cites Connelly as teaching "loose temporal constraints" at column 5, lines 27-28, see Office Action, page 3. The Applicant respectfully disagrees that Connelly teaches or suggests the concept of "loose temporal constraints".

[0009]   Background on "loose temporal constraints." Referring for example to the Applicant's paragraph [0012], "loose temporal constraints" are imprecise descriptions of the timing and relative timing of events. As noted in [0012], "For instance, a user can specify three events utilizing objects where the first object is positioned prior to the second object and the second object is position prior to the third object. In this situation, the information that has been conveyed by the user is that these events are to be

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executed in sequence. However, nothing has been specified as to the particular start and stop times of particular events or the duration for which each event will operate." Thus, "loose temporal constraints" describe the timing of events in a very general sense, such as event A starts before event B, but not exactly when either event starts of stops.

[0010]   Referring to Connelly at column 5, Connelly teaches specific times for specific events. Accordingly, Connelly fails to teach or suggest, "wherein the loose temporal constraints specify relative timing information but not exact literal times that that each of the plurality of events is to be executed", as recited by the claim. Consequently, Connelly and Eatough do not teach or suggest that "*loose temporal constraints specify relative timing information but not exact literal times that that each of the plurality of events is to be executed*", as recited by claim 1 as amended. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

[0011]   Claim 1 recites in part, "an order component that determines a plurality of event execution orders." The Office cites Connelly at column 8, lines 57-60 as teaching this element (see Office Action, page 3). The Applicant respectfully disagrees that Connelly teaches or suggests the use of "plurality of event execution orders", and submits that Connelly teaches only a single event order, i.e. Connelly teaches only a single timing sequence by which plural events are scheduled.

[0012]   Background on "plurality of event execution orders". Referring to the Applicant's specification at Fig. 15 block 1520 and paragraphs [0042] and [0067], and other locations, the Applicant discusses how a plurality of event section orders can be created. *The event execution orders describe specific details on the execution of the*

events that are consistent with the "loose temporal constraints" supplied by the user.
Thus, because the user supplied only "loose" constraints, more than one "event execution order" can be created, while still in keeping with the "loose" constraints provided by the user. Thus, the Applicant recites that "a plurality of event execution orders" is determined. (Later aspects of the Applicant's claim are directed to selecting "an optimal event execution order from the plurality of event execution orders".)

[0013]   Referring to Connelly at column 8, Connelly teaches that an event queue 260 is sorted to become the sorted event queue 270 (see Connelly's Fig. 3). The sorted event queue 270, having been sorted "in order by their next scheduled time or time and date of event occurrence" (Connelly column 8 lines 58-60) is a single "execution order". Thus, Connelly teaches only a single execution order, and fails to teach or suggest "a plurality" of such orders. Accordingly, Connelly fails to teach or suggest a "component that determines a plurality of event execution orders", as recited by claim 1, as amended. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

[0014]   Claim 1 recites in part, "all of the plurality of execution orders do not provide the same specific temporal constraints on the plurality of events, but all of the plurality of execution orders are based on the loose temporal constraints." The Office has not addressed this current amendment to claim 1. Moreover, the Applicant submits that the prior art of record fails to teach or suggest a plurality of execution orders according to the claim amendment.

[0015]   Additional background on "event execution orders".   Referring to the Applicant's Summary at paragraph [0010], [0012] and other locations, the use of

different execution orders is discussed. Different execution orders are possible because "users need not specify exact literal times that an event or task is to be executed" (Applicant's specification at [0012], first several lines). That is, the loose temporal constraints given by the user allow for creation of a plurality of different event execution orders (i.e. different orderings of the exact timing of the events, made possible by the "loose" temporal constraints indicted by the user), wherein each of the plurality of event execution orders satisfies the loose temporal constraints given by the user.

[0016]   The Applicant respectfully submits that the prior art of record fails to teach or suggest a "plurality of execution orders do not provide the same specific temporal constraints on the plurality of events, but all of the plurality of execution orders are based on the loose temporal constraints and on the execution system information", as recited. In fact, the Applicant submits that the prior art of record fail to teach or suggest (1) "loose temporal constraints" and also (2) "a plurality of execution orders" and also (3) their relationship in the above-cited passage recited by claim 1, as amended.

[0017]   Consequently, Connelly and Eatough do not teach or suggest all of the elements and features of this claim. Accordingly, Applicant respectfully requests that the rejection of this claim be withdrawn.

Dependent Claims 2, 3, 5 and 7

[0018]   Claims 2-7 ultimately depend from independent claim 1. As discussed above, claim 1 is allowable over the cited documents. Therefore, claims 2-7 are also allowable over the cited documents of record for at least their dependency from an allowable base claim. These claims may also be allowable for the additional features that each recites.

[0019]   Claim 27 was also rejected as allegedly being obvious over Connelly in view of Eatough. However, claim 27 has been amended similarly to claim 1. Thus, claim 27 is allowable for at least the reasons that claim 1 is allowable. Accordingly, the Applicant incorporates the remarks from above at this location.

Claims 8 and 29 Are Non-Obvious Over Colle in view of Eatough

[0020]   Claims 8, 9, 12-22, 24, 26, 29-31, 35, 39, 44 and 45 stand rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Colle in view of Eatough. Applicant respectfully traverses the rejection.

Independent Claims 8 and 29

[0021]   In light of the amendments presented herein, Applicant submits that the rejections of independent claims 8 and 29 are moot. Specifically, these claims have been amended as seen below to overcome the rejections.

> 8. **(Currently Amended)** An interactive computer-implemented system for specifying and executing temporal order events, comprising a processor executing:
>   a display component that provides a plurality of object workspaces, wherein the workspaces are user interfaces including a past, present and future space, wherein the present space is an editable area, and wherein the past and future space specify temporal constraints associated with a plurality of events;
>   a design component that temporally associates and disassociate objects in the editable area, wherein the design component receives, from a user, loose temporal constraints governing event execution orders; and

an order component that determines a plurality of event execution orders, wherein:

each of the plurality of execution orders provides a sequence by which the plurality of events could be executed in accordance with the loose temporal constraints;

each of the plurality of execution orders specifies exact literal times each of the plurality of events is executed;

the exact literal times are consistent with the loose temporal constraints;

all of the plurality of execution orders do not provide the same specific temporal constraints on the plurality of events; and

the order component selects an optimal event execution order from the plurality of event execution orders in accordance with execution system information.

[0022]   Claims 8 and 29 have been amended in a manner similar to claims 1 and 27, and are allowable for at least the reasons those claims are allowable. Accordingly, the remarks from above are incorporated herein with respect to claims 8 and 29.

[0023]   Claim 8 has been amended to recite, in part, "an order component that determines a plurality of event execution orders".

[0024]   Similarly, claim 29 recites "generating a plurality of execution orders based at least on the temporal association of the objects".

[0025]   In making out a rejection of these claims, the Office suggested that Colle at [0060] (in rejecting claim 29) and [0064] (in rejecting claim 8) teaches the recited claim elements. The Applicant respectfully disagrees.

[0026]   Referring to Colle at [0060], Colle teaches that an event start date and end date can be specified. However, such a single description of the event schedule does

not suggest determining "a plurality of event execution orders". That is, Colle teaches only that one event execution order is determined, based on the start/end circumstances of event(s). The Applicant respectfully submits that this one event order does not constitute the plurality of event orders recited by the applicant's claim.

[0027] Referring to Colle at [0064], aspects of a user interface and schedule changing is disclosed. Thus, a single event order can be changed by operation of the user interface. The Applicant respectfully submits that this single event order (scheduling), even if it is changed, does not constitute a plurality of execution orders. The Applicant believes it teaches a single event execution order, and teaches that the single event execution order can be changed if desired. Thus, at any given time, Colle teaches that only one execution order is present in the user interface, although it can be altered.

[0028] The Applicant respectfully submits that such a disclosure does not render obvious determining "a plurality of event execution orders". In contrast to the teaching of Colle, the Applicant's claim recites determining a plurality of execution orders, which then allows selection of "an optimal event execution order from the plurality of event execution orders", as recited by the claim. In contrast, Colle teaches creation of one execution order, which may be altered, and is then used to allocate the resources. That is, Colle does not teach or suggest creating "a plurality of execution orders". Colle simply teaches a single execution order.

[0029] Consequently, Colle and Eatough do not teach or suggest all of the elements and features of claims 8 and 29. Accordingly, Applicant respectfully requests that the rejections of these claims be withdrawn.

Dependent Claims 9, 11-22, 24-26 30, 31, 35, 36 and 39-45

[0030]   Claims 9, 11-22, 24-26 30, 31, 35, 36 and 39-45 ultimately depend from independent claims 8 and 29, respectively.   As discussed above, claims 8 and 29 allowable over the cited documents.   Therefore, claims 9, 11-22, 24-26 30, 31, 35, 36 and 39-45 are also allowable over the cited documents of record for at least their dependency from an allowable base claim. These claims may also be allowable for the additional features that each recites.

Conclusion

[0031]   In view of the above claim amendments and arguments, the Applicant respectfully submits that the claims are in condition for allowance.   Accordingly, the Applicant respectfully requests reconsideration and prompt issuance of the application. The   Applicant   would   welcome   the   opportunity   to   discuss   any   remaining amendments/issues with the Examiner, and would greatly welcome a call from the Examiner to advance the prosecution of this application.

Respectfully Submitted,

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